

## NEW DESCRIPTIONS

### NEW HUNTSMAN SPIDERS (HETEROPODIDAE: ARANEAE) FROM BUXA TIGER RESERVE, JALPAIGURI, WEST BENGAL<sup>1</sup>

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(With thirteen text-figures and one plate)

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Two new species, *Heteropoda straminiosa* sp. nov. and *Olios tikaderi* sp. nov. are described and illustrated from Buxa Tiger Reserve, Jalpaiguri, West Bengal.

#### INTRODUCTION

Huntsman spiders (Heteropodidae: Araneae) of West Bengal are so far known by 7 species of *Heteropoda* Latreille and 3 of *Olios* Walckenaer (Biswas and Biswas 1992, Sethi and Tikader 1988), and from Buxa Tiger Reserve by 2 species, namely, *Heteropoda leprosa* Simon (Biswas and Biswas 1992) and *Heteropoda buxa* Saha *et. al.* (Saha *et al.* 1994, 1995).

Both *Heteropoda straminiosa* and *Olios tikaderi* have been recognized as new species after comparing them with the types deposited in the National Collection, Zoological Survey of India, Calcutta. The species are described and illustrated. Type specimens are at present in the collection of the Entomology Laboratory, Department of Zoology, University of Calcutta, Calcutta. Collection of further material from the type locality will enable us to deposit the material in the National Collection, Zoological Survey of India, Calcutta.

#### MATERIAL AND METHODS

Collection and preservation of the spider samples were done following Tikader (1987). The

material was studied using a stereozoom binocular microscope, model Zeiss, SV8. All the measurements are in millimetres, made with an eyepiece graticule.

The status of the two species has been confirmed following Biswas and Biswas (1992), Pocock (1900), Sethi and Tikader (1988) and Tikader (1987).

*Heteropoda straminiosa* sp. nov.  
(Figs. 1-6; Plate 1A)

**Holotype:** FEMALE: Total length 8.43; carapace length 3.14, width 2.90; abdominal length 5.28, width 3.43. Legs as in Table 1.

Colour in alcohol: Cephalothorax, legs and abdomen yellowish with small brown spots all over, those on abdomen more dense and heavy, particularly on the posterior part.

**Carapace:** Slightly longer than wide, anteriorly narrow; cephalic region slightly raised, marked by weakly impressed cervical grooves that enclose a weaker brown median longitudinal line; anterior margin of cephalothorax straight with the anterolateral corners raised and conical, with a few long brown hairs, otherwise with short thinly distributed brown hairs; thoracic region with a deeply distinct longitudinal fovea, encircled by thinly distributed short brown hairs, extending posteriorly as a deeply distinct longitudinal groove; cephalothorax midlongitudinally with faint brown U-shaped patch,

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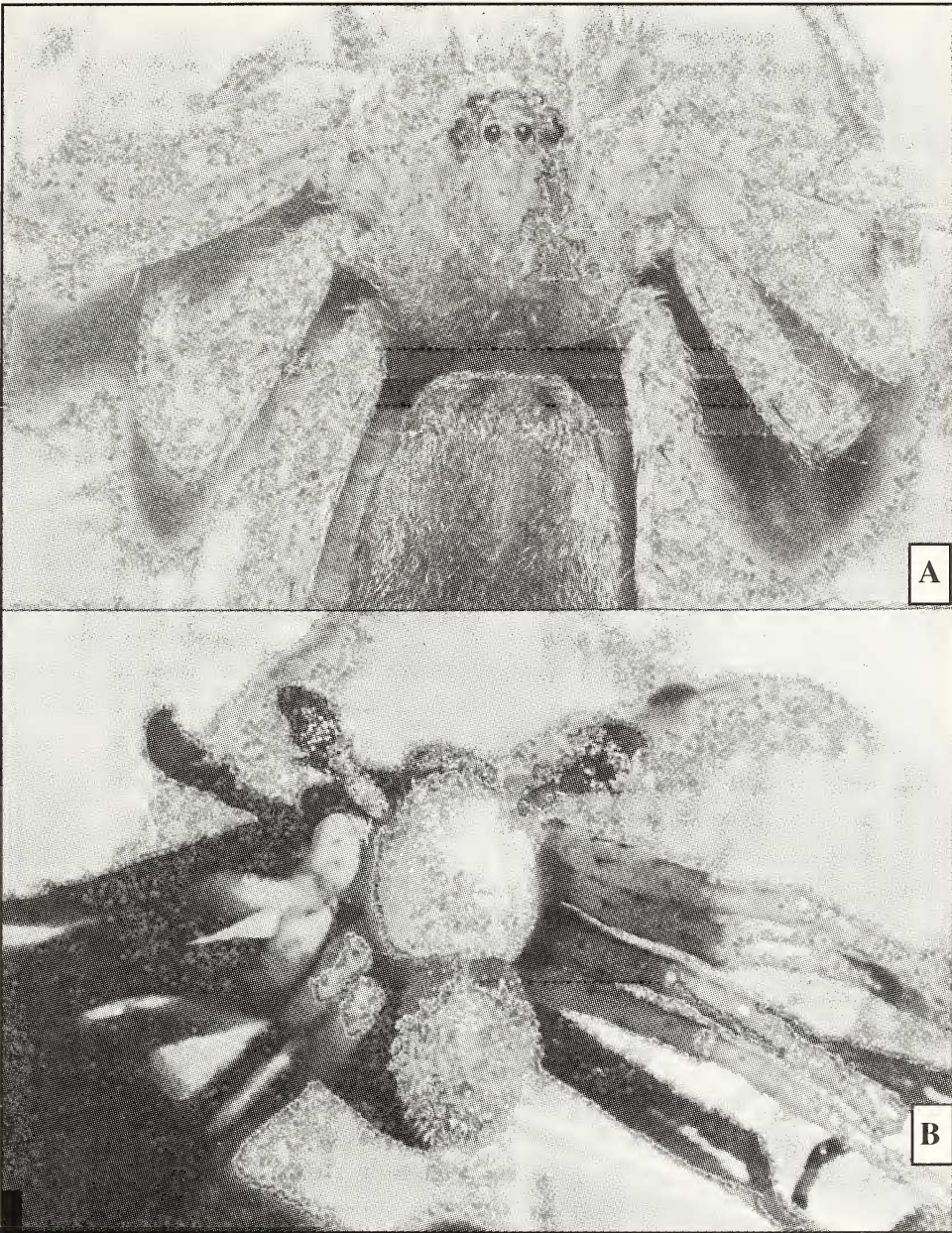
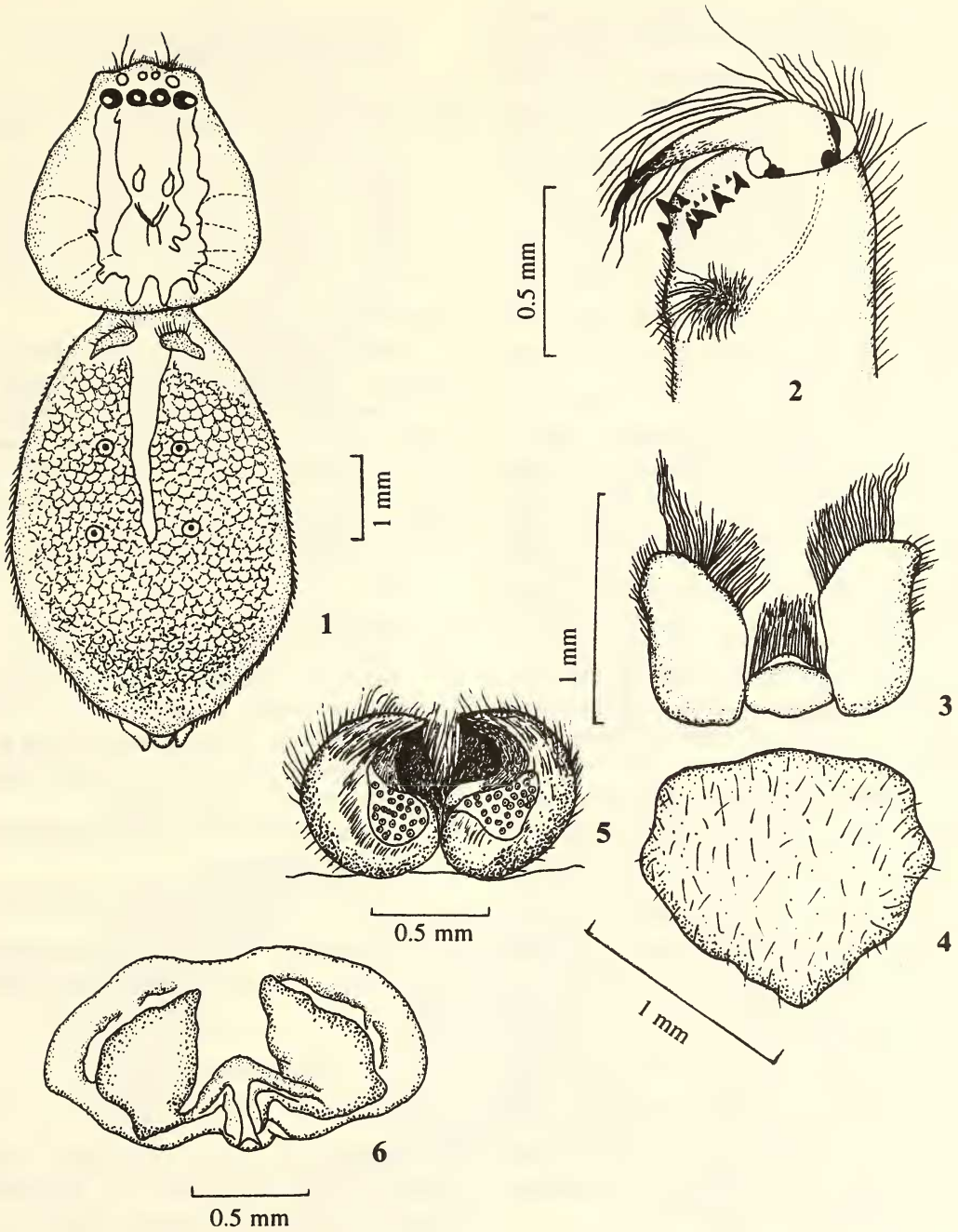


Fig. A: *Heteropoda straminiosa* sp. nov. Female: Holotype

Fig. B: *Olios tikaderi* sp. nov. Male: Holotype





Figs. 1-6: *Heteropoda straminiosa* sp. n., female holotype:

1. Whole body; 2. Chelicerae; 3. Maxillae and labium; 4. Sternum; 5. Epigynum; 6. Internal genitalia

extending upto the posterolateral eyes marked by brownish pubescence; outwardly directed faint radii present. Eyes in two rows, with black patches, on brownish area, anterior row shorter than posterior row; anterior row of eyes procurved as seen from in front and posterior row recurved as seen from above; laterals subequal, anteromedians smallest; posterolaterals situated on somewhat elevated tubercle; ocular quad longer than wide, wider posteriorly. Chelicerae strong, yellowish with dark brown dorsal spots, inner margin with 4 teeth and outer with 3; area between the margins with a few much smaller teeth; each with a ventral tuft of long hair on brown patch at the inner aspect of cheliceral base, fangs reddish brown, strongly curved. Labium and maxillae yellowish, the latter anteriorly brownish; labium wider than long, maxillae longer than wide, both thickly scopulate. Sternum yellowish, nearly triangular, anteromedially wide, posteriorly narrowing, with brown spots and long and short pale yellow to brown hairs. Legs moderate, basally yellowish, gradually becoming brown; tibia with long paired ventral spines; tarsal scopulae distinct; Leg formula 2143.

**Abdomen:** elongate oval, dorsum anteriorly yellowish, posteriorly brownish, anteriorly with a pair of dark median brown patches, marked by cluster of brown hairs; midlongitudinally with yellowish bar, entirely clothed with golden yellow hairs and pubescence, these posteriorly longer, a few anterior hairs brown; sigilla two pairs. Venter yellow, with scattered brown longitudinal bands, these midlongitudinally broad and narrowed posteriorly; entirely clothed with golden and brown hairs. Epigynum with paired comma-shaped lateral lobes, basally close to each other, divergent anteriorly, forming a depression; epigynum and internal genitalia as in Figs. 5 & 6.

Male unknown.

**Specimen examined:** *Holotype*, Female, South Volka, BTR, Jalpaiguri, West Bengal, India, 27.xii.1995, Coll. V. Biswas. **Paratypes**,

TABLE I  
MEASUREMENTS OF LEG SEGMENTS OF  
*HETEROPODA STRAMINIOSA* SP. NOV.  
(FEMALE)

Leg	Femur	Patella & Tibia	Metatarsus	Tarsus	Total
I	3.8/3.8	4.1/4.1	3.3/3.3	0.9/0.9	12.1/12.1
II	4.1/4.1	4.3/4.3	3.0/3.0	1.2/1.2	12.6/12.6
III	3.5/3.5	3.5/3.5	2.4/2.4	0.8/0.8	10.2/10.2
IV	3.6/3.6	3.7/3.7	3.2/3.2	1.0/1.0	11.5/11.5

5 females, data same as holotype.

**Distribution:** INDIA: West Bengal, Jalpaiguri (known only from the type locality).

**Remarks:** The new species shows close affinity to *Heteropoda akashi* Sethi and Tikader (Sethi and Tikader 1988), in being similar in general appearance, chelicerae, maxillae and labium, but distinct in having:

- 1) Carapace and legs with distinct small brown spots,
- 2) Faintly impressed cervical grooves,
- 3) Weakly recurved posterior row of eyes,
- 4) Chelicerae with an additional row of small teeth between the margins,
- 5) Abdomen with a midlongitudinal band and anterolaterally with a pair of dark brown patches bearing cluster of hairs,
- 6) Epigyne, spermathecae and spermathecal ducts quite different.

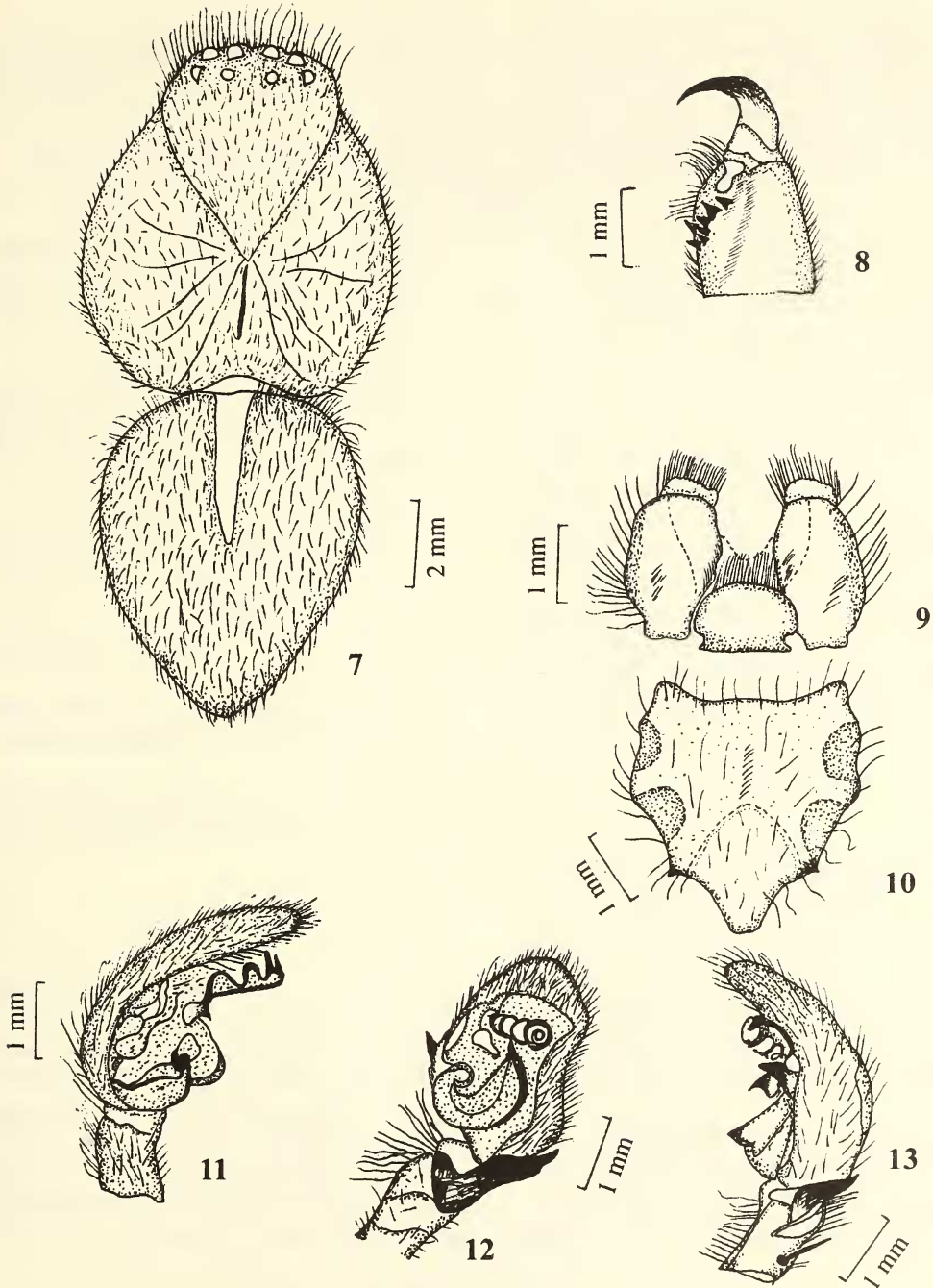
These differences justify the recognition of the species as new to science.

**Etymology:** The species *Heteropoda straminiosa* is so named because of its yellow colour.

*Olios tikaderi* sp. nov.  
(Figs. 7-13; Plate 1B)

**Holotype:** one MALE: Total length 15.41; carapace length 8.00, width 7.59; abdominal length 7.41, width 5.76. Legs as in Table 2.

Colour in alcohol: Cephalothorax orangish with cephalic part anteriorly reddish; legs yellowish, gradually becoming darker distally, abdomen greyish.



Figs. 7-13: *Olios tikaderi* sp. n., male holotype:

7. Whole body; 8. Chelicerae; 9. Maxillae and labium; 10. Sternum; 11. Male palp (prolateral view);  
12. Male palp (ventral view); 13. Male palp (retrolateral view).

**Carapace:** Longer than wide, convex, clothed with hairs and spines; cephalic region raised, cervical furrows weakly distinct, thoracic fovea reddish, longitudinal, deeply distinct, radii weakly distinct, clypeal and ocular regions with some long, black bristles. Eyes in two rows, anterior row from above slightly recurved and posterior row slightly procurved; anteromedians largest; ocular quad squarish, narrowing anteriorly. Chelicerae long, reddish, inner and outer margins with 5 and 2 teeth respectively, fangs black, robust. Labium and maxillae both yellowish brown, anteriorly thickly scopulate; labium wider than long with a lateral notch on each side; maxillae longer than wide. Sternum orangish, convex, nearly heart-shaped, with long brown hairs. Legs long and strong, hairy; all tibiae with two pairs of ventral spines. Leg formula 2143. Male palp as in Figs. 11, 12 and 13.

**Abdomen:** Heart-shaped, anteriorly broad and posteriorly tapered, with long golden hairs, dorsum midlongitudinally with a yellowish streak extending on the anterior half. Venter greyish with a midlongitudinal brownish bar extending from epigastric furrow to the spinnerets.

TABLE 2  
MEASUREMENTS OF LEG SEGMENTS OF *OLIOS*  
*TIKADERI* SP. NOV. (MALE)

Leg	Femur	Patella & Tibia	Metatarsus	Tarsus	Total
I	11.5/11.5	16.5/16.5	11.0/11.0	3.0/3.0	42.0/42.0
II	13.5/13.5	17.5/17.5	13.0/13.0	3.0/3.0	47.0/47.0
III	8.5/8.5	13.0/13.0	9.5/9.5	2.5/2.5	33.5/33.5
IV	11.0/11.0	14.0/14.0	11.0/11.0	2.5/2.5	38.5/38.5

**Specimen examined:** **Holotype**, Male, Jayanti, BTR, Jalpaiguri, West Bengal, India, 24.v.1995, Coll. B. Kundu.

**Distribution:** INDIA: West Bengal,

Jalpaiguri (known only from the type locality).

**Remarks:** The present species is closely allied to *Olios xerxes* (Pocock) but differs in the following:

- 1) Body entirely clothed with long hairs,
- 2) Carapace broader than abdomen, with distinct cervical furrows and radii,
- 3) Abdomen anteriorly broad and posteriorly tapering, dorsum anteromedially with a yellowish streak and devoid of any sigilla, and
- 4) Structurally different male palp.

Again, the species is distinct from *Olios punctipes* Simon, even though the male palps are similar, by the following characters:

- 1) Carapace longer than wide,
- 2) Labium with a lateral notch
- 3) Abdomen peripherally devoid of dark patch and without any sigilla,
- 4) Structure of cymbium,
- 5) Structure and origin of retrolateral apophysis.

The species is therefore new to science, this has been confirmed by the Zoological Survey of India, Calcutta.

**Etymology:** The species is named after a great Indian arachnologist, the late Dr. B.K. Tikader.

#### ACKNOWLEDGEMENTS

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#### REFERENCES

- BISWAS, B. & K. BISWAS (1992): Fauna of West Bengal, Part-3, Araneae: Spiders. *State Fauna Series, Zool. Surv. India*, 3: 357-500.
- POCOCK, R.I. (1900): The Fauna of British India. Arachnida. Taylor & Francis, London, pp 279.
- SAHA, S., V. BISWAS & D. RAYCHAUDHURI (1994):

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- Heteropodidae and Lycosidae of Buxa Tiger Reserve, West Bengal. *Acta arachnol.* 43: 43-48.
- SAHA, S., V. BISWAS & D. RAYCHAUDHURI (1995): A new name for *Heteropoda acuta* Saha, Biswas et Raychaudhuri, 1994 (Araneae: Heteropodidae). *Acta arachnol.* 44(1): 15-16.
- SETHI, V.D. & B.K. TIKADER (1988): Studies on some giant crab spiders of the family Heteropodidae from India. *Rec. Zool. Surv. India.* Occ. Pap. 93: 1-94.
- TIKADER, B.K. (1987): Handbook of Indian Spiders. Director, Zoological Survey of India, pp 251.

